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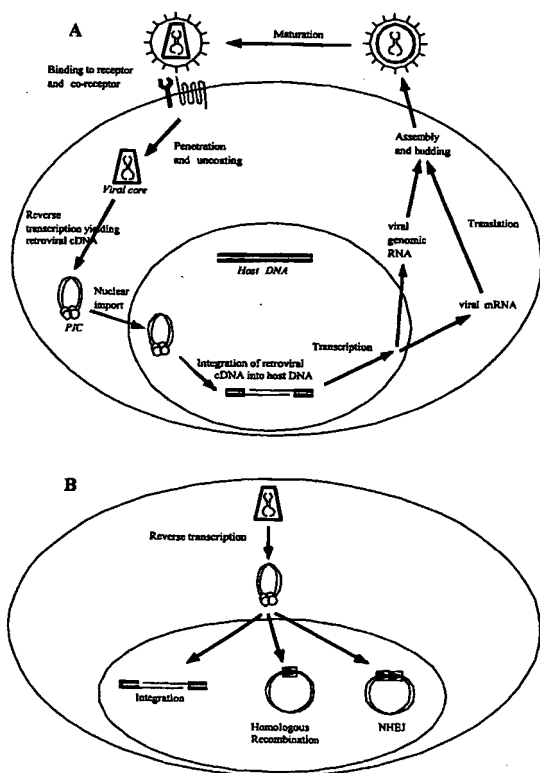
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(54) Title: METHODS OF IDENTIFYING COMPOUNDS THAT MODULATE A DNA REPAIR PATHWAY AND/OR RETROVIRAL INFECTIVITY, THE COMPOUNDS, AND USES THEREOF



(57) Abstract: Retroviruses are RNA viruses that must insert a DNA copy (cDNA) of their genome into the host genome in order to carry out a productive infection. One host cellular pathway that defends against retroviral cDNA integration involves highly conserved proteins of a host DNA repair pathway. These proteins represent novel targets for anti-retroviral drugs. The invention presented herein provides, inter alia, methods of identifying compounds that induce a DNA repair pathway and/or inhibit retroviral cDNA integration into a host genome, compounds thus identified, uses of such compounds, and kits for identifying and testing of the efficacy of compounds in inducing a DNA repair pathway, inhibiting retroviral cDNA integration, and inhibiting retroviral infection.